PENDING CLAIMS

1. (Original) A method of improving receiver performance by avoiding bad pilots, the method comprising:

using a pilot mask in the receiver,

wherein the pilot mask includes a set of flags, the set of flags associated with certain sub-channels,

wherein each flag in the set of flags determines whether its associated sub-channel is usable for pilot tracking.

2. (Original) The method of Claim 1, wherein if a spur will coincide with a sub-channel, then the pilot mask will not allow that sub-channel to be used for pilot tracking.

3. (Original) The method of Claim 1, wherein if a spur affects a sub-channel, then the pilot mask will not allow that sub-channel to be used for pilot tracking.

4. (Original) The method of Claim 1, wherein the set of flags includes 52 flags associated with 52 sub-channels.

5. (Original) The method of Claim 1, wherein the pilot mask is usable for any data rate.

6. (Original) A pilot mask for improving receiver performance by avoiding bad pilots, the pilot mask comprising:

a set of flags, the set of flags associated with certain sub-channels, wherein each flag in the set of flags determines whether its associated sub-channel is usable for pilot tracking.

7. (Withdrawn) A method of providing an accurate channel estimate to a decoder, the method comprising:

determining whether each sub-channel is one of a good sub-channel and a bad sub-channel;

converting any good sub-channel including a spur to a bad sub-channel; and

providing information regarding good and bad sub-channels, including converted sub-channels, to the decoder.

8. (Withdrawn) A method of improving signal decoding in a receiver, the method comprising:

determining whether each sub-channel is one of a good sub-channel and a bad sub-channel;

converting any good sub-channel including a spur to a bad sub-channel;

weighting bits of a signal in a good channel more than bits a bad sub-channel; and

providing the weighted information to a decoder.

9. (Withdrawn) The method of Claim 8, wherein a Viterbi mask implements the weighting and the decoder is a Viterbi decoder.

10. (Withdrawn) The method of Claim 8, wherein weighting includes adjusting based on data rate.

11. (Withdrawn) The method of Claim 10, wherein bits affected by a spur at a higher data rate have a different weighting than bits affected by a spur at a lower data rate.

12. (Withdrawn) A decoding circuit in a receiver, the decoding circuit comprising:

a Viterbi decoder; and

a Viterbi mask in operative relation to the Viterbi

decoder, the Viterbi mask providing a weighted channel estimate for each sub-channel based on spur information.

13. (Withdrawn) The decoding circuit of Claim 12, wherein the Viterbi mask provides the weighted channel estimate further based on at data rate information.

14. (Withdrawn) A filter system for canceling a spur from a signal, the filter system comprising:

a first mixer coupled to receive the signal;

a low-pass filter coupled to an output of the first mixer;

a second mixer coupled to an output of the low-pass filter; and

an adder coupled to receive the signal and subtract an output of the second mixer.

15. (Withdrawn) The filter system of Claim 14, wherein first mixer performs a rotation of the signal that generates a spur estimate at DC, thereby allowing the low-pass filter to estimate a phase and an amplitude of the spur.

16. (Withdrawn) The filter system of claim 14, wherein the low-pass filter is a growing box filter.

17. (Withdrawn) The filter system of Claim 16, wherein the growing box filter includes:

a first accumulator for providing a cumulative sum of a sample; and

a second accumulator for providing a total sum of all samples to a current symbol.

18. (Withdrawn) A method for canceling a spur from a

signal, the method comprising:

rotating the signal to generate a first rotated signal;

performing a filtering computation based on the first rotated signal to generate a filtered signal;

rotating the filtered signal to generate a second rotated signal; and

subtracting the second rotated signal from the signal.

19. (Withdrawn) The method of Claim 18, wherein performing the filtering computation includes:

setting a sample set size;

computing a cumulative sum for the sample set over time;

when the sample set size is reached, then adding the cumulative sum to a total sum and resetting the cumulative size to zero;

computing an estimated spur value by dividing the total sum by a total number of samples, wherein the estimated spur value is provided as the filtered signal; and

periodically increasing the sample set size over time.

20. (Withdrawn) The method of Claim 19, wherein if the cumulative sum is denoted by cs[n] and the total sum is denoted by ts[n], then adding the cumulative sum to the total sum and resetting the cumulative size to zero occurs when n is a power of 2.

21. (Withdrawn) A method of improving a sub-channel estimate for a received signal, the method comprising:

determining sub-channel estimates for a plurality of sub-channels of the received signal; and

if a first sub-channel includes a spur, then ignoring the determined sub-channel estimate of the first sub-channel,

computing an interpolated sub-channel estimate based on sub-channels adjacent the first sub-channel, and providing the interpolated sub-channel estimate as the sub-channel estimate for the first sub-channel.

22. (Withdrawn) A method for canceling a spur from a signal, the method comprising:

rotating the signal to generate a first rotated signal;

performing a filtering computation based on the first rotated signal to generate a filtered signal;

rotating the filtered signal to generate a second rotated signal;

subtracting the second rotated signal from the signal to generate a modified signal; and

after subtracting, computing self-correlation of the modified signal.

23. (Withdrawn) A method for canceling a spur from self-correlation of a signal, the method comprising:

rotating the signal to generate a first rotated signal;

performing a filtering computation based on the first rotated signal to generate a filtered signal;

rotating the filtered signal to generate a second rotated signal, which represents a spur effect;

computing self-correlation of the signal to generate a modified signal; and

subtracting the spur effect from the modified signal.

24. (Withdrawn) A filter system for canceling a spur from a signal, the filter system comprising:

a first mixer coupled to receive the signal;

a low-pass filter coupled to an output of the first mixer;

a self-correlation block coupled to receive the signal;

a second mixer coupled to an output of the low-pass filter; and

spur removal means coupled to receive the signal, an output of the second mixer, and an output of the self-correlation block.